Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_

**Circles Practice Problems**

Solve for the indicated variable. Make sure to show high quality work.

|  |  |
| --- | --- |
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |

For these proofs, I want you to focus on strategy and precision—saying why something is more important than saying what it’s called. For example, the “definition of a parallelogram” is not as precise as saying “a quadrilateral with opposite sides parallel.”

In terms of strategy, I want you to be able to identify your main goal, then your corresponding sub-goals BEFORE you write out your proof. See my example of goals and possible sub-goals.

|  |  |
| --- | --- |
| **Goal** | **Possible Sub-Goals** |
| Prove at least two angles are congruent | Find congruent triangles and use “corresponding parts of congruent triangles are congruent” (for sides or angles) |
| Prove at least two sides are congruent | Show two arcs are congruent, which would make either the chords that intercept the arcs congruent OR the inscribed or central angles that intercept those arcs congruent |

**Given:** The diagram as shown

with Circle *O*, *BD*=*CD*.

**Prove:** The triangle is isosceles.

*A*

*B*

*C*

*D*

*.*

*O*

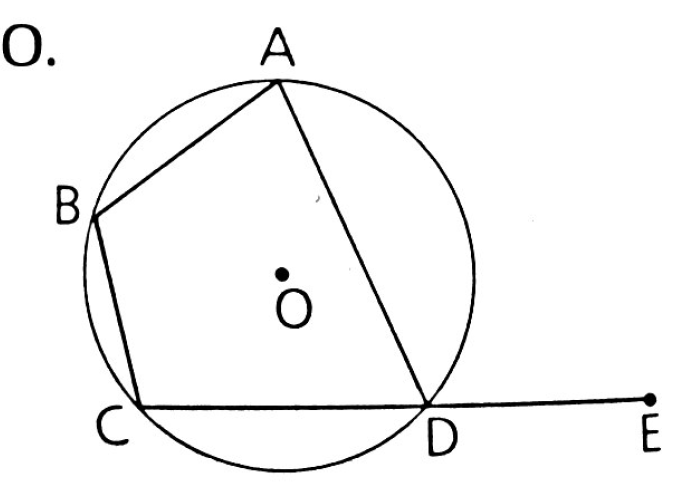
*Now write out a proof for the example above:*

|  |  |
| --- | --- |
| **Statements** | **Reasons** |
|  |  |

Now try it yourself! In the proof below, write out your goal and sub-goals, then write the proof.

**Given:** Quadrilateral *ABCD* inscribed in Circle *O*

**Prove: **



|  |  |
| --- | --- |
| **Goal** | **Possible Sub-Goals** |
|  |  |
|  |  |